Stantec

July 7, 2009

Kristen Chamberlain
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

Subject: **Oakfield Wind Project, Aroostook County, Maine**
MDEP# L-24572-24-A-N; IL-24572-TF-B-N

Dear Kristen:

Attached for filing is supplemental information for the above referenced application for the Oakfield Wind Project. As previously discussed, this filing updates seasonal vernal pool and rare plant work; provides the results of a recent site visit with Norm Dube of DMR and LeeAnn Neal of the Corps; includes an addendum to Section 30, the visual impact analysis; and submits an errata to the Section 5 sound report.

Vernal pools

The vernal pool report (Section 7, Appendix 7-1, page 5) noted that there were 16 potential vernal pools in the project area that were identified in 2008 outside spring vernal pool season and required seasonally appropriate visits to determine their status. The design of the project is now known, and only one of those potential pools is within 500 feet of any project element (near turbine S06). That pool was visited this spring and determined to be a significant vernal pool; a data sheet is included as Attachment 1.

Figure 1 illustrates the significant vernal pool habitat impacts caused by the crane road in this location. The project was designed with an assumption that this might be a significant vernal pool. The road crosses the drainage where wetland impact will be minimized, and swings slightly north to bend away from the pool. Due to the steepness to the north, any further movement in that direction would increase the grade above 10% and result in substantially more cut and fill. With this effort at minimization, new disturbance is limited to 6% of the significant vernal pool habitat. The total impact for old and new activity is 18% of the total habitat; 82% remains undisturbed.

Rare Plants

In Section 9, page 9-1, it was noted that the areas around proposed turbines S07 and S08 and their associated roads needed a seasonally appropriate evaluation for rare plants. That effort was conducted this spring, and no rare plants were identified in this area.

DMR site visit

In evaluating whether the project qualifies for Category 1 permitting under the PGP with the US Army Corps of Engineers, the Corps suggested a field evaluation of the one perennial stream crossed by the project to determine if it was Essential Fish Habitat, or Critical Habitat under the new USFWS rule for critical salmon habitat. LeeAnn Neal, Norm Dube, First Wind, SGC Engineering and myself visited the stream on June 11,

2009. During that visit, Norm concluded that it was "extremely unlikely" that salmon could populate the location of the crossing. Emails from Norm dated June 16 and June 23 are attached for your information as Attachment 2.

Visual Assessment Addendum

An Addendum to the Section 30 Visual Impact Assessment report is enclosed as Attachment 3. This Addendum is required due to the discovery that the LURC portion of Pleasant Lake in T4R3 WELS is on the LURC list of scenic lakes. The copy of the 1987 *Maine Wildlands Lakes Assessment* posted on the Wind Power Task Force website was used to screen this project for recognized scenic lakes. It was recently determined that there were three pages of lakes missing from that posting, including Pleasant Lake (the Task Force has been advised and has since updated the report on their website).

The Addendum analyzes the views from the eastern, LURC portion of the lake. It finds that the locations of camps, orientation of the lake, distance and configuration of the turbines from the lake all contribute to the conclusion that the project does not have an unreasonable adverse impact on the scenic values and existing uses related to scenic character of Pleasant Lake.

Sound report errata

Finally, when recently reviewing the RSE sound report included in Section 5 of the application, it was noticed that two receiver locations (R1, R2) in Table 1 on page 6 had incorrect road names associated with the locations. Provided as Attachment 4 is a corrected page 6 with the appropriate road names (Spaulding Lake Road and Brown Road).

Please contact me if you have questions regarding these submissions.

Also, as I noted in our telephone conversation the other day, one of the landowners off South Oakfield Road plans to conduct a timber harvesting operation on a 300 acre parcel that is one of the project parcels (Davis, Lot 2-1). This timber harvest work is unrelated to the project and is planned to be on a portion of the parcel away from the planned project area. I just wanted to make you aware of the harvesting activity since it is on a parcel that includes part of the project area.

I wish you the best in your transition to a new position.

Sincerely,

Brooke

Brooke E. Barnes
Project Manager

Cc: Alec Jarvis, First Wind
Town of Oakfield

Attachment 1

Significant Vernal Pool Data Collection Form

Project: Oakfield 195600152	Survey Date (1st): 5/4/09
Town/County: Oakfield, Aroostook	Surveyor's Initials (1st): MPA
Associated Wetland ID (if applicable): S122 (01ttm/10cfc)	Survey Date (2nd): 6/4/09
Vernal Pool ID: 04MA	Surveyor's Initials (2nd): MPA

VERNAL POOL SURVEY INFORMATION: Is this pool?: ☒ **SVP** **or** ☐ **VP**

Photos:* #'s 7, 8
*Number and Location

Wetland Habitat Characterization:

- **Choose the best descriptor for the physical setting**

☒ Isolated Wetland Depression
☐ Isolated Upland Depression
☐ Other:_____
☐ Pool associated with larger wetland complex
☐ Floodplain Depression

- **Check all wetland types that best apply to this pool:**

☒ Forested swamp
☒ Shrub swamp
☐ Peatland (fen or bog)
☐ Emergent marsh
☐ Wet meadow
☐ Shallow pond
☐ Abandoned beaver flowage
☐ Active beaver flowage
☐ Slow stream
☐ Floodplain overflow
☐ Headwater seepage
☐ Other:_____

Vernal Pool Status under the Natural Resources Protection Act (NRPA)

Natural Origin

- **Select the pool's origin:**

☐ Natural ☒ Natural-Modified ☐ Unnatural ☐ Unknown

If modified, unnatural or unknown, describe any modern or historic impacts to the wetland:
Past harvests around pool, likely in pool as well

Hydrology

- **Select the pool's estimated hydroperiod AND provide rationale for opinion:**

☐ Permanent ☐ Semi-permanent ☒ Ephemeral ☐ Unknown

Semi-permanent: drying partially in all years and completely in drought years
Ephemeral: drying out during the growing season in most years
Onoclea sensibilis present throughout pool

- **Maximum depth at survey:**

Visit 1:	☐ 0-12"	☒ 12-36"	☐ 23-60"	☐ >60"
Visit 2:	☒ 0-12"	☐ 12-36"	☐ 23-60"	☐ >60"

- **Approximate size of pool (at spring highwater):**

Width:75 ft. Length:120 ft.

- **Faunal indicators (check all that apply):**

☐ Fish (list species if known):_____
☐ Bull or green frog tadpoles

Inlet/Outlet Permanency

Type of inlet or outlet:
☒ No inlet or outlet
☐ Ephemeral inlet or outlet
☐ Permanently flowing inlet or outlet
☐ Other (explain):_____

- **Predominant substrate:**

☐ Mineral soil (bare, leaf-litter bottom, upland mosses)
☐ Mineral soil (sphagnum moss present)
☒ Organic matter (muck, mud): shallow or restricted to deepest area
☐ Organic matter (muck, mud): deep and wide spread

Significant Vernal Pool Data Collection Form (Page 2 of 2)

- **Non-woody pool vegetation (check all that apply):**

☐ Terrestrial nonvascular species, (e.g., haircap moss *Lycopodium* spp.)

☒ Sphagnum moss

☐ Dry site ferns (e.g., spinulose wood ferns, lady fern, polypody fern)

☒ Wet site ferns (e.g. *Osmunda* spp.)

☒ Moist site ferns (e.g., sensitive fern, marsh fern, NY fern)

☒ Wet site graminoids (e.g., grasses, sedges)

☒ Moist site vasculars (e.g., skunk cabbage, jewelweed)

☐ Aquatic vasculars (e.g., pickerelweed)

☐ Floating submerged aquatics (e.g. water lilies, bladderwort)

Abundance Criteria:

- Was the entire pool comprehensively surveyed for egg masses? ☐ Yes ☐ No

Indicator Species	Egg Masses						Tadpoles/Larvae			
	#		Method of Verification*		Confidence Level**		Method of Verification*		Confidence Level**	
Wood frog	~60	0	S	S	3	3	—	S	—	3
Spotted salamander	24	13	S	S	3	3	—	—	—	—
Blue-spotted salamander	0	0	—	—	—	—	—	—	—	—

* Method of verification: S = Seen; H = Handled; P = Photographed

** Confidence level: 1 = <60%; 2 = 60-95%, 3 = >95%

- **Fairy shrimp observed:** ☐ Yes ☒ No

Rarity Criteria:

- Was a specific effort made to survey for rare species: ☒ Yes ☐ No
- Note any rare species associated with pool. Check the method(s) of verification and fill in the confidence level (CL) for each species observation.

Species	Method of Verification*				CL	Species	Method of Verification*				CL
	V	P	H	S			V	P	H	S	
Blanding's turtle	☐	☐	☐	☐		Wood turtle	☐	☐	☐	☐	
Spotted turtle	☐	☐	☐	☐		Ribbon snake	☐	☐	☐	☐	
Ringed boghaunter	☐	☐	☐	☐		Comet darner	☐	☐	☐	☐	

* Method of verification: V = Vouchered; P = Photographed; H = Handled; S = Seen

Field Sketch:

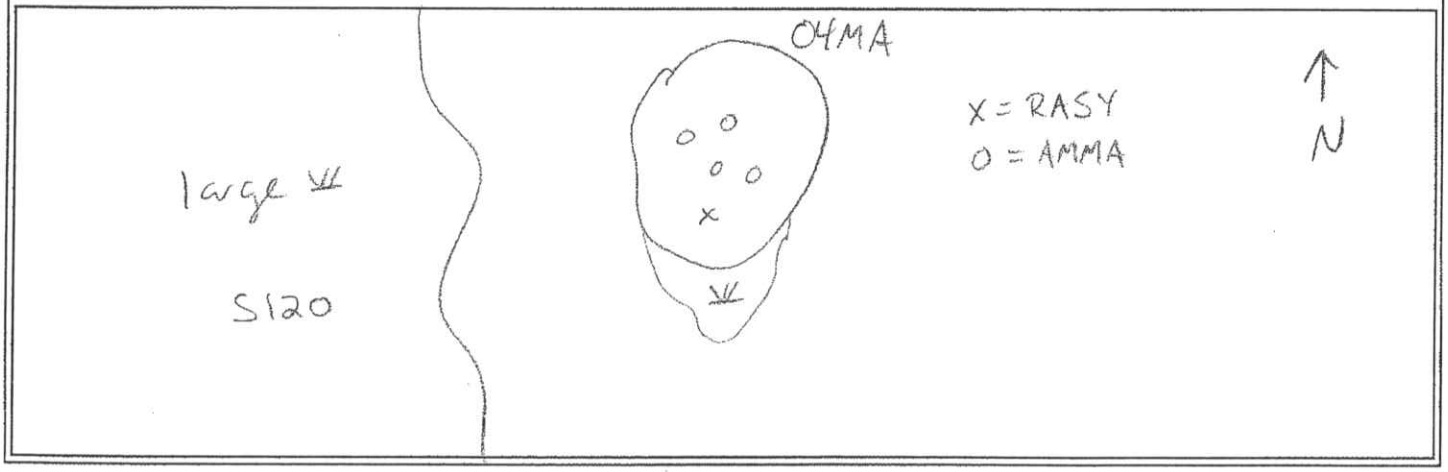
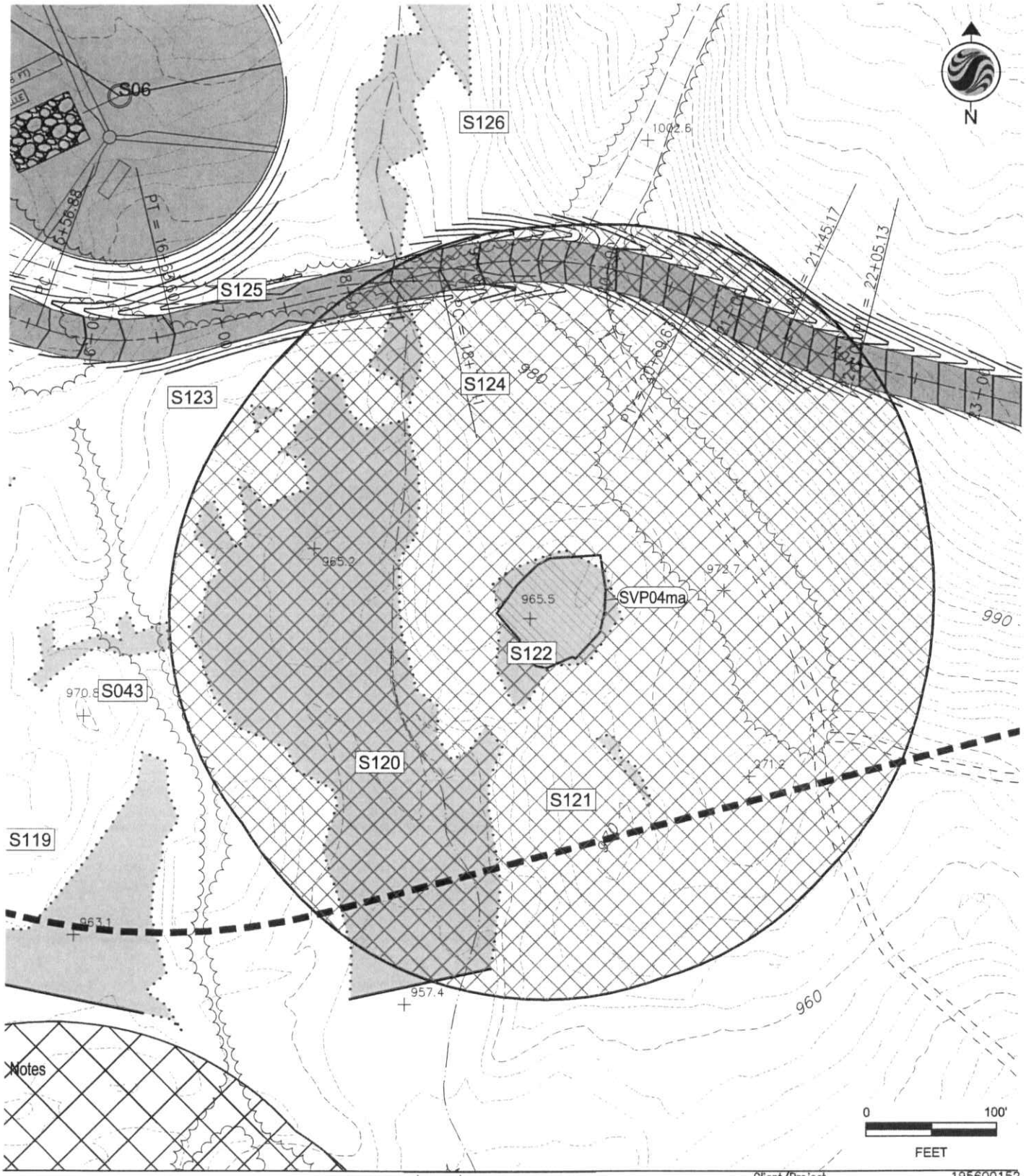


Figure 1



Notes

Stantec Consulting Services Inc.
30 Park Drive
Topsham ME U.S.A.
04086
Tel. 207.729.1199
Fax. 207.729.2715
www.stantec.com

Stantec

Legend

- Wetland identified by Stantec
- Vernal pool identified by Stantec
- 250' Vernal pool habitat buffer
- Delineation limits
- S000 Resource identification
- SVP01 Significant vernal pool identification

Client/Project 195600152
Evergreen Wind Power II, LLC
Oakfield Wind Project
Oakfield, Maine

Figure No.
1.0

Title
Significant Vernal Pool 04ma
Habitat Impact Map

June 04, 2009

00152-00-SVP04ma.dwg

Attachment 2

-----Original Message-----
From: Dube, Norm [mailto:Norm.Dube@maine.gov]
Sent: Tuesday, June 23, 2009 8:49 AM
To: Neal, LeeAnn NAE; Barnes, Brooke
Subject: RE: Oakfield Wind Project: stream crossing site visit

LeeAnn,

Glad to go out in field for a change!

One item that I left out of my email is that no fish were observed in the stream as we waded into the stream and walked up to the cascades. One would expect that if fish were present, they would have been spooked by our activities and easily observed.

Norm

-----Original Message-----
From: Neal, LeeAnn NAE [mailto:LeeAnn.Neal@usace.army.mil]
Sent: Tuesday, June 23, 2009 8:15 AM
To: Dube, Norm; Barnes, Brooke
Subject: RE: Oakfield Wind Project: stream crossing site visit

Norm,
Thank you for your comments and your time.

LeeAnn

LeeAnn B. Neal
Project Manager
U.S. Army Corps of Engineers
Permits & Enforcement Branch
Regulatory Division
675 Western Ave. #3
Manchester, Maine 04351
(207)623-8367 ext.2
fax (207)623-8206

-----Original Message-----
From: Dube, Norm [mailto:Norm.Dube@maine.gov]
Sent: Tuesday, June 16, 2009 12:53 PM
To: Barnes, Brooke; Neal, LeeAnn NAE
Subject: RE: Oakfield Wind Project: stream crossing site visit

LeeAnn and Brooke,

It was good to get out on June 11, 2009 and view the stream that First Wind may cross as part of the development of the Oakfield Wind Power Project.

It is not known at this time if the stream in question is Downing Brook or a tributary to Downing. Downing Brook enters the East Branch Mattawamkeag just downstream of the Red Bridge located on the East Branch approximately 5

miles south of Oakfield. DMR routinely stocks Atlantic salmon fry into the East
Branch Mattawamkeag downstream of the Red Bridge. DMR has never stocked Atlantic salmon in Downing Brook nor surveyed Downing Brook (and its tributaries) for Atlantic salmon habitat or for the presence of spawning or juvenile Atlantic salmon. Therefore, it is unknown if Atlantic salmon are or possibly could be found in Downing Brook or its tributaries.

On June 11, 2009, Brooke Barnes (Stantec), LeeAnn Neal (ACOE), Norm Dube (DMR), and two First Wind employees walked several sections of the brook downstream of and up to a proposed road-stream crossing. In question are whether two cascades prevent adult and/or juvenile Atlantic salmon from migrating above the cascades into suitable habitat where the road-stream crossing is proposed to be located.

In my opinion, it is extremely unlikely that adult Atlantic salmon would be found in this stretch of the brook since the size of the brook is not conducive to adult Atlantic salmon movements. Discharge in the brook would be higher in the fall at the time of spawning; however, spawning habitat and holding pools were not observed.

The brook does contain habitat that could support juvenile Atlantic salmon. It is conceivable that juvenile Atlantic salmon could enter into the brook (e.g from the East Branch where salmon are stocked) and swim as far up as the cascades. Four photos in the attached PDF file illustrate the cascades. It is my opinion that, at the observed discharge, it is unlikely that juvenile Atlantic salmon could surmount the cascades since flow is quite laminar making it difficult for salmon to swim up through this flow field for any length. There were no pockets for fish to jump into and from should salmon attempt to surmount the cascades. Higher discharges would make any attempts to swim up through even more difficult.

If you have any questions about these comments, please contact me at your convenience.

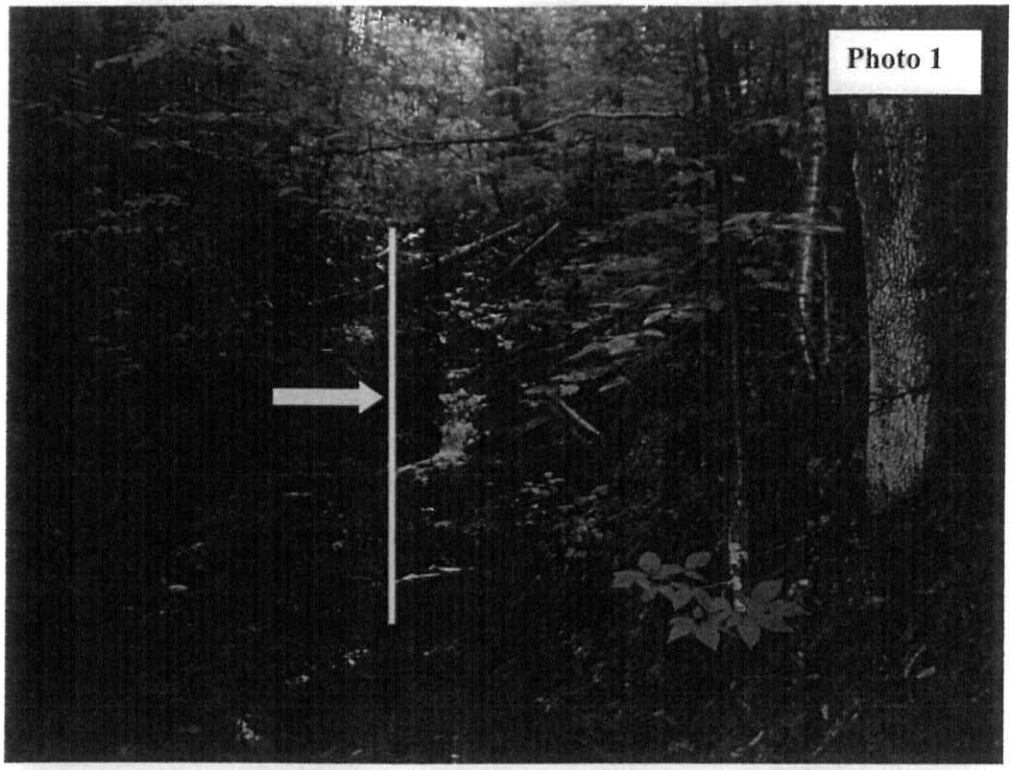
Norm

><(((°> ><(((°> ><(((°> ><(((°> ><(((°>
Norman R. Dubé
Fisheries Scientist
Maine Dept. of Marine Resources
Bureau of Sea Run Fisheries and Habitat 650 State St., Bangor, ME 04401

Tel: (207) 941-4453
Mobile: (207) 557-9194
Fax: (207) 941-4443

visit our website at:
http://www.maine.gov/dmr/searunfish/index.shtml

Photos taken by LeeAnn Neal, ACOE, during a June 11, 2009 site visit



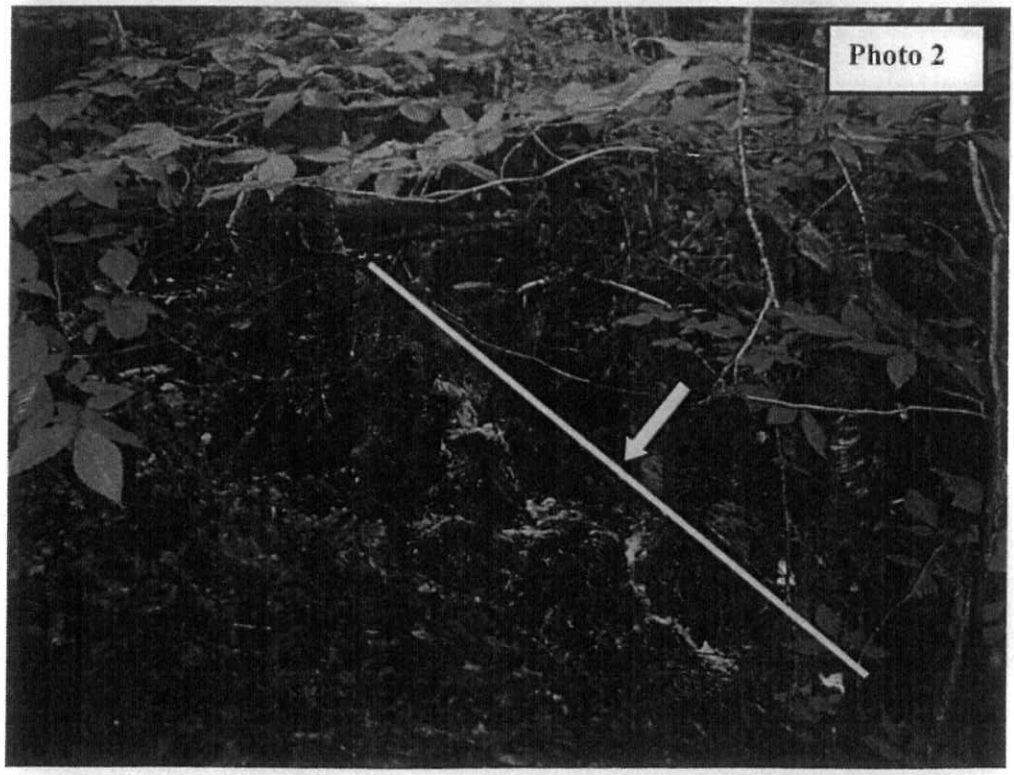


Photo taken by LeeAnn Neal, ACOE, during a June 11, 2009 site visit

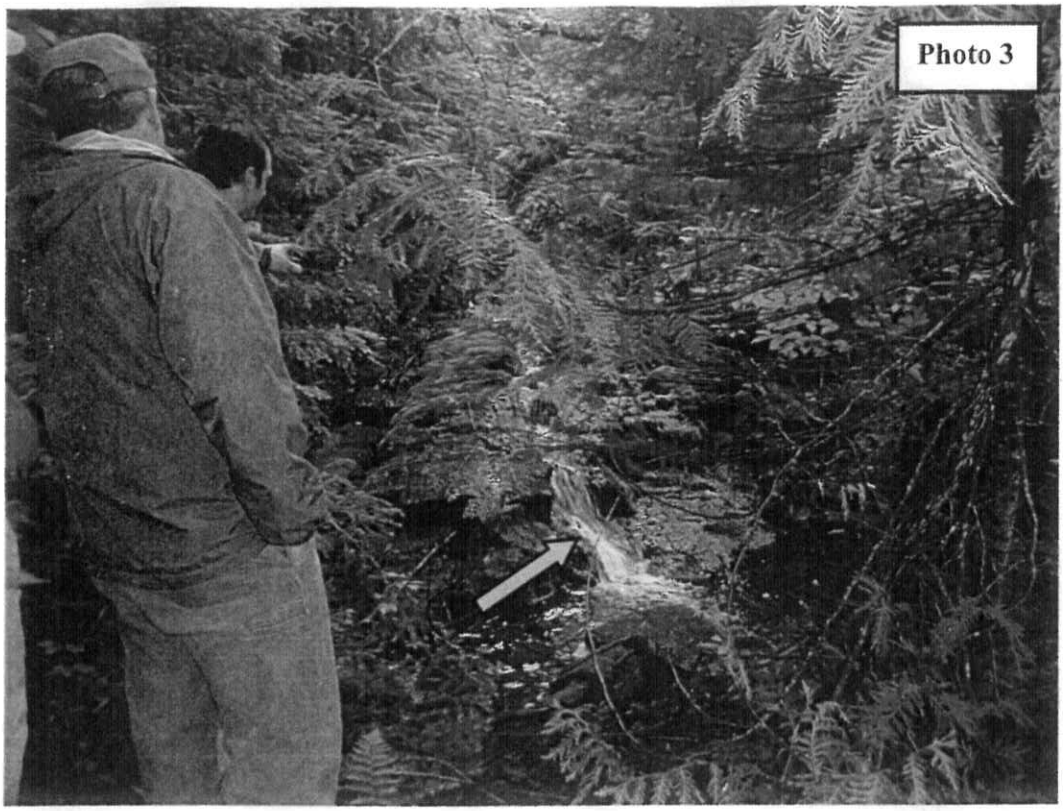
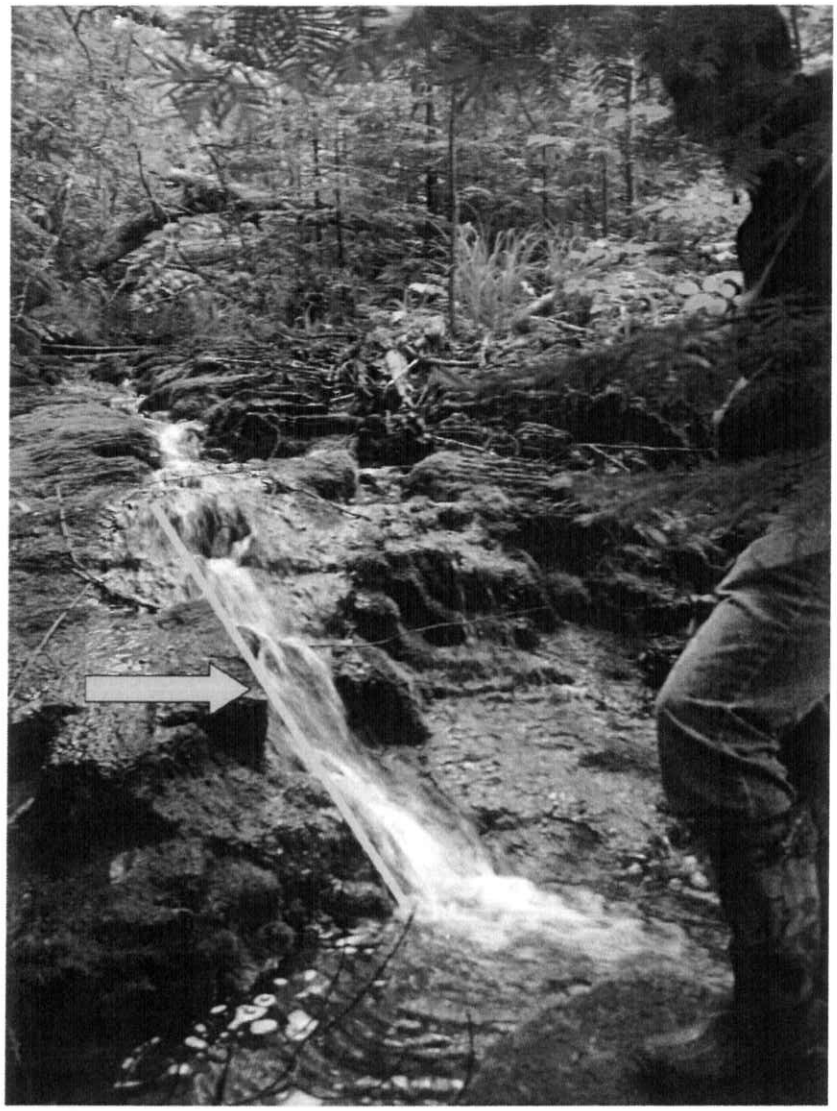


Photo taken by Brooke Barnes, Stantec, during a June 11, 2009 site visit



Attachment 4

landowners have signed agreements with Evergreen II allowing sound levels from the project that could exceed otherwise applicable Maine DEP sound level limits. Excluding purchase or leased land and parcels where required sound easements have been obtained (see Figure 3), Table 1 presents a list of receiver points in the vicinity of Oakfield Wind where applicable sound level limits are most restrictive to the project. These receiver points are also shown on Figure 3.

Table 1

Maine DEP Hourly Sound Level Limits (dBA)

Receiver Point [A]	Description	Distance From Nearest Wind Turbine (ft)	Maine DEP Hourly Limit (dBA) Daytime	Nighttime	Limit Basis
R1	Residential parcel off Spaulding Lake Road north of Oakfield North	2,550	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R2	Residential parcel off Brown Road northeast of Oakfield North	1,950	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R3	Residential parcel off Brown Road east of Oakfield North	2,160	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R4	Residential parcel off Nelson Road southwest of Oakfield North	1,990	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R5	Residential parcel off Thompson Settlement Road west of Oakfield North	2,200	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R6	Residential parcel off Nelson Road northeast of Oakfield South	1,850	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R7	Residential parcel off South Road east of Oakfield South	2,190	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R8	Residential parcel off Thompson Settlement Road west of Oakfield South	1,860	55	45	Quiet limits at protected location within 500 feet of existing dwelling
R9	Residential parcel off Thompson Settlement Road northwest of Oakfield South	2,690	55	45	Quiet limits at protected location within 500 feet of existing dwelling

[A] See Figure 3, Vicinity Site Plan.

The Maine DEP regulation specifies sound level limits in terms of hourly A-weighted equivalent sound levels ($L_{Aeq\text{-}Hr}$). At protected locations where tonal or short duration repetitive sounds are present from operation of the wind project, 5 dBA is added to these sound levels for purposes of determining compliance with applicable sound level limits.

7.0 FUTURE SOUND LEVELS

7.1 Construction

Sound from construction activity is both temporary and variable. Many construction machines operate intermittently and equipment varies with each construction phase. A variety of construction equipment will be used to build the wind project including earth-moving equipment for land clearing, excavation,